Amendments to the Claims

Claim 1 (Currently amended): A method for increasing nucleotide transfer and expression in recipient cells comprising:

introducing to said recipient cell two or more vectors comprising a first replication incompetent viral vector, and a second replication incompetent viral vector, wherein one or both of said vectors comprise a nucleotide sequence the expression of which is desired in said recipient cell, and further wherein said first and second viral vectors are complementary in trans, so that upon cotransduction viral replication is enabled, wherein each vector is capable of sustained replication and capable of being produced independently of each other in separate trans-complementing packaging cell lines, thereby providing individual higher titers than vectors that are produced co-dependently on the same packaging cell line.

Claim 2 (Original): The method of claim 1 wherein said nucleotide sequence is an expression construct.

Claim 3 (Currently amended): The method of claim 1 wherein said viral vectors are ~~is~~ selected from the group consisting of:

~~retrovirus~~ retroviral vector, ~~adenovirus~~ adenoviral vector, Herpes virus vector ~~virus~~, adeno-associated viral vector~~virus~~, ~~lentivirus~~ lentivirus vector, Epstein Barr viral vector ~~virus~~, and Reovirus vector.

Claim 4 (Currently amended): The method of claim 3 wherein said ~~virus~~ vectors are ~~is an adenovirus~~ adenoviral vectors.

Claim 5 (Currently amended): The method of claim 43 wherein said first ~~or second replication incompetent~~ adenoviral vector is an E1 mutant.

Claim 6 (Currently amended): The method of claim 43 wherein said ~~first or~~ second vector is an E4 mutant.

Claim 7 (Currently amended): The methods of claim 4~~5~~ or 6 wherein one or both of said ~~first or second~~ vectors is an E3 mutant.

Claim 8 (Currently amended): The method of claim 6 ~~7~~ wherein said ~~first or~~ second vector is recombinant 1014.

Claim 9 (Currently amended): The method of claim ~~7~~ 5 wherein said first ~~or second~~ vector is AVC2.TK.

Claim 10 (Original): The method of claim 1 wherein said nucleotide sequence encodes green fluorescent protein.

Claim 11 (Currently amended): The method of claim 1 wherein said sequence is ~~encodes~~ a tumor suppressor gene.

Claim 12 (Currently amended): The method of claim 1 wherein said sequence is ~~encoded~~ a tumor suicide gene.

Claim 13 (Original): A recipient cell transformed by the method of claim 1.

Claim 14 (Currently amended): A composition for transforming a recipient cell comprising: first and second viral vectors wherein said vectors are replication incompetent cotranscomplements of each other and wherein each vector is capable of sustained viral replication and capable of being produced independently in a trans-complementing packaging cell line, thereby providing individual higher titers than transcomplementing vectors that are produced co-dependently on the same packaging cell line.

Claim 15 (Currently amended): The ~~method~~ composition of claim 14 wherein said viral vectors are replication incompetent adenoviral vectors.

Claim 16 (Currently amended): The ~~method~~ composition of claim ~~15~~ 44 wherein said first ~~or second~~ vector is an E4 mutant.

Claim 17 (Currently amended): The ~~method~~ composition of claim ~~15~~ 44 wherein said ~~first or~~ second vector is an ~~E3~~ E1 mutant.

Claim 18 (Currently amended): The ~~method~~ composition of claim ~~15~~ 16 wherein said first ~~or second~~ vector is recombinant 1014.

Claim 19 (Currently amended): The ~~method~~ composition of claim ~~15~~ 17 wherein ~~said first or~~ second vector is AVC2.TK.

Claim 20 (Currently amended): A method for increasing gene transfer to recipient cells comprising:

introducing to said recipient cell a first replication incompetent adenoviral vector, and a second replication incompetent adenoviral vector, wherein one or both of said vectors comprise a nucleotide sequence the expression of which is desired in said recipient cell, wherein said first and second adenoviral vectors are transcomplementary, so that upon cotransduction viral replication is enabled, wherein each vector is capable of sustained viral replication and capable of being produced independently of each other in separate trans-complementing packaging cell lines, thereby providing individual higher titers than vectors that are produced co-dependently on the same packaging cell line.

Claim 21 (Original): The method of claim 20 wherein said nucleotide sequence is an expression construct.

Claim 22 (Currently amended): The method of claim ~~20~~ 45 wherein said first ~~or second~~ replication incompetent adenoviral vector is an E1 mutant.

Claim 23 (Currently amended): The method of claim ~~20~~ 45 wherein said ~~first or~~ second vector is an E4 mutant.

Claim 24 (Currently amended): The method of claims ~~20~~ 22 or 23 wherein one or both of said ~~first or second~~ vectors is an E3 mutant.

Claim 25 (Currently amended): The method of claim ~~24~~ 23 wherein said ~~first or~~ second vector is recombinant 1014.

Claim 26 (Currently amended): The method of claim ~~24~~ 22 wherein said first ~~or second~~ vector is AVC2.TK.

Claim 27 (Original): The method of claim 20 wherein said nucleotide sequence encodes green fluorescent protein.

Claim 28 (Currently amended): The method of claim 20 wherein said sequence is ~~encodes~~ a tumor suppressor gene.

Claim 29 (Currently amended): The method of claim 20 wherein said sequence is ~~encodes~~ a tumor suicide gene.

Claim 30 (Original): A recipient cell transformed with the vectors of claim 20.

Claim 31 (Currently amended): A composition for transforming a recipient cell comprising: first and second adenoviral vectors wherein said vectors are replication incompetent cotranscomplements of each other and wherein each vector is capable of sustained viral replication and capable of being produced independently of each other in separate trans-complementing packaging cell lines, thereby providing individual higher titers than vectors that are produced co-dependently on the same packaging cell line.

Claim 32 (Currently amended): The ~~method~~ composition of claim ~~31~~ 46 wherein said first ~~or second~~ replication incompetent adenoviral vector is an ~~E1 /E3~~ E1 deletion mutant.

Claim 33 (Currently amended): The ~~method~~ composition of claim ~~31~~ 46 wherein said ~~first or~~ second vector is an E4 mutant.

Claim 34 (Currently amended): The ~~method~~ composition of claims ~~31~~ 32 or 33 wherein one or both of said ~~first or second~~ vectors is an E3 mutant.

Claim 35 (Currently amended): The ~~method~~ composition of claim ~~31~~ 33 wherein said ~~first or~~ second vector is recombinant 1014.

Claim 36 (Currently amended): The ~~method~~ composition of claim ~~31~~ 32 wherein said first ~~or second~~ vector is AVC2.TK.

Claim 37 (Withdrawn): A method of inducing tumor cell regression comprising: introducing to said tumor cell a first replication incompetent adenoviral vector, said vector including a nucleotide sequence which encodes a suicide gene, the expression of which is desired in said recipient tumor cell, and a second replication incompetent adenoviral vector, said vector comprising a suicide gene the expression of which is desired in said recipient cell, wherein said first and second adenoviral vectors are transcomplementary.

Claim 38 (Withdrawn): The method of claim 37 wherein said suicide gene is a sodium iodide symporter gene.

Claim 39 (Withdrawn): The method of claim 37 wherein said suicide gene is a herpes simplex virus thymidine kinase gene.

Claim 40 (Withdrawn): The method of claim 39 further comprising the step of: introducing an agent to activate said suicide gene.

Claim 41 (Withdrawn): The method of claim 40 wherein said agent is radioactive iodide.

Claim 42 (Withdrawn): A method of inducing tumor cell regression comprising: introducing to said tumor cell a first replication incompetent adenoviral vector, said vector including a nucleotide sequence which encodes a thyroid sodium iodide symporter gene, the expression of which is desired in said recipient tumor cell, and a second replication incompetent adenoviral vector, said vector comprising a sodium iodide symporter gene the expression of which is desired in said recipient cell, wherein said first and second adenoviral vectors are transcomplementary, and thereafter exposing said tumor cells to radioactive iodide.

Claim 43 (New): The method of claim 4 wherein the said first and second adenoviral vectors have mutually excluding mutations in any two or more of the genes selected from the group consisting of E1, E2, E4, L1, L2, L3, L4 and L5.

Claim 44 (New): The composition of claim 15 wherein the said first and second adenoviral vectors have mutually excluding mutations in any two or more genes selected from the group consisting of E1, E2, E4, L1, L2, L3, L4 and L5.

Claim 45 (New): The method of claim 20 wherein the said first and second adenoviral vectors have mutually excluding mutations in any two or more genes selected from the group consisting of E1, E2, E4, L1, L2, L3, L4 and L5.

Claim 46 (New): The composition of claim 31 wherein the said first and second adenoviral vectors have mutually excluding mutations in any two or more genes selected from the group consisting of E1, E2, E4, L1, L2, L3, L4 and L5.